EFFICIENT METHOD FOR TRACEBACK DECODING OF TRELLIS (VITERBI) CODES

ABSTRACT

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A Viterbi decoder circuit having at least two data selection blocks and at least two trace registers, the number of registers corresponding to the number of states in a Viterbi trellis diagram applicable to encoded data. The trace registers are used to represent the current state best metric and are each configured to send their output to

10   the inputs of the predecessor states representing the possible branches to the current state. The best metric for the predecessor state is determined using a survivor vector stored in memory. Traceback occurs by sequentially reading survivor vectors from memory, using the vectors to control the data selection blocks, and using the trace registers to sequentially identify predecessor states in the traceback.

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